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Proceedings of the Zonal Advisory Process of Atlantic Herring (NAFO Divisions 4VWX)

Compte Rendu du Processus de Consultation Zonal pour le Hareng Atlantique (Zones de l'OPANO 4VWX)

March 17, 2008
Gulf Fisheries Centre
Moncton (NB)

17 mars 2008
Centre des Pêches du Golfe
Moncton (N.-B.)

Gérald Chaput
Oceans and Science Branch
(Chair)

Gérald Chaput
Secteur des Océans et des Sciences
(Président)

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Gulf Region / Région du Golfe
P.O. Box 5030 / C.P. 5030
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December 2010 | **Décembre 2010**

Foreword

The purpose of these Proceedings is to document the activities and key discussions of the meeting. The Proceedings include research recommendations, uncertainties, and the rationale for decisions made at the meeting. Proceedings also document when data, analyses or interpretations were reviewed and rejected on scientific grounds, including the reason(s) for rejection. As such, interpretations and opinions presented in this report individually may be factually incorrect or misleading, but are included to record as faithfully as possible what was considered at the meeting. No statements are to be taken as reflecting the conclusions of the meeting unless they are clearly identified as such. Moreover, further review may result in a change of conclusions where additional information was identified as relevant to the topics being considered, but not available in the timeframe of the meeting. In the rare case when there are formal dissenting views, these are also archived as Annexes to the Proceedings.

Avant-propos

Le présent compte rendu a pour but de documenter les principales activités et discussions qui ont eu lieu au cours de la réunion. Il contient des recommandations sur les recherches à effectuer, traite des incertitudes et expose les motifs ayant mené à la prise de décisions pendant la réunion. En outre, il fait état de données, d'analyses ou d'interprétations passées en revue et rejetées pour des raisons scientifiques, en donnant la raison du rejet. Bien que les interprétations et les opinions contenues dans le présent rapport puissent être inexactes ou propres à induire en erreur, elles sont quand même reproduites aussi fidèlement que possible afin de refléter les échanges tenus au cours de la réunion. Ainsi, aucune partie de ce rapport ne doit être considérée en tant que reflet des conclusions de la réunion, à moins d'indication précise en ce sens. De plus, un examen ultérieur de la question pourrait entraîner des changements aux conclusions, notamment si l'information supplémentaire pertinente, non disponible au moment de la réunion, est fournie par la suite. Finalement, dans les rares cas où des opinions divergentes sont exprimées officiellement, celles-ci sont également consignées dans les annexes du compte rendu.

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SUMMARY

These proceedings document the peer review process and the discussions specific to the Atlantic herring stock of NAFO Division 4VWX in eastern Canada which took place on March 17, 2008. The science review was conducted in response to a request for science advice from DFO Fisheries and Aquaculture Management (DFO FAM) for an assessment of the 4VWX herring management unit in support of the upcoming fishery. The 2008 assessment was conducted using the previously agreed assessment approach. There were 34 participants at the meeting including science personnel from the four Atlantic DFO regions, DFO FAM, members of the Fisheries Research Conservation Council, provincial governments, and the fishing industry and processors. The participants at the meeting reviewed the assessment documents, developed the stock status conclusions and advice, and reviewed the draft Science Advisory Report for Atlantic herring from this management unit.

SOMMAIRE

Ce compte rendu présente un sommaire du processus de revue par les pairs et les discussions portant sur le hareng atlantique de l'unité de gestion 4VWX de l'OPANO de l'est du Canada, tenu le 17 mars 2008. Cet examen scientifique a été effectué dans le but de répondre à la demande d'avis formulée par la Direction de la gestion des pêches et de l'aquaculture (GPA) du MPO à l'égard de l'état de ces stocks de hareng pour la prochaine pêcherie. L'évaluation de 2008 suivait l'approche d'évaluation convenue précédemment. On comptait 34 participants à la réunion en provenance des sciences des quatre régions atlantique du MPO, du MPO GPA, des participants du Conseil pour la Conservation des Ressources Halieutiques, des gouvernements provinciaux, et de l'industrie de la pêche et des transformateurs. Les participants à la réunion ont passé en revue les documents d'évaluation, ont élaboré les conclusions sur la situation du stock et les avis, et ont passé en revue l'ébauche du rapport d'avis des sciences pour le hareng atlantique de cet unité de gestion.

INTRODUCTION

A scientific review of the status of several pelagic fish species and stocks was conducted at the Gulf Fisheries Centre, in Moncton (NB), March 17 to 20, 2008. The fish species and stocks reviewed were:

- 4VWX Atlantic herring,
- 4T Atlantic herring,
- 4RST Capelin, and
- Mackerel NAFO Zones 3 & 4.

The stocks were reviewed sequentially in a single meeting to facilitate the exchange among DFO scientists working on these stocks in three DFO regions of eastern Canada. As well, the Fisheries Resources Conservation Council (FRCC) was tasked with reviewing herring management in Atlantic Canada and the review of the two large herring fisheries at one time provided an opportunity for members from FRCC to participate in the science review.

These proceedings document the peer review process and the discussions specific to the Atlantic herring stock of NAFO Division 4VWX in eastern Canada which occurred on March 17, 2008.

Notifications of the science review and conditions for participation were sent to identified industry associations (Appendix 1) and aboriginal peoples groups (Appendix 2) from the Maritime provinces, Quebec, and Newfoundland.

The terms of reference are in Appendix 3.

The nominated participants were sent a letter with a draft agenda, list of documents to be reviewed, the working documents themselves (if available prior to the meeting), and guidelines for accessing the Gulf Fisheries Centre in Moncton (NB) (Appendix 4).

The chair opened the meeting at 8:30 AM. The logistics for the meeting room were reviewed and a summary of the science advisory process was presented. The science review is expected to conform to the principles and guidelines for the effective use of science and technology advice in government decision making including:

- inclusiveness (broad scope of expertise)
- sound science and advice (must be based on the best science available)
- uncertainty and risk (advice must be provided with a clear description of the extent of what is known and how the uncertainties affect the advice), and
- transparency and openness (advice provided and the discussions around the science review are available to everyone).

The process of requesting science advice, preparation of the assessment documents, the science review, drafting and delivery of the advisory report were explained (Appendix 5).

The chair then reviewed the rules of exchange for the meeting reminding participants that the meeting was a science review and not a consultation. As well, everyone at the meeting had equal standing as participants as there was no observer status at the meeting. Table microphones were provided to ensure good communication during the meeting, requiring that exchanges be conducted one at a time, and if required through order of the chair. Finally, the objective was to achieve consensus at the meeting.

The chair then invited the participants to introduce themselves; the list of participants is provided in Appendix 6.

Following the introductions, one of the industry participants asked to comment on the meeting organization for this review. The individual objected to the conditions for the science review which restricted participation to one individual per association and for the review of the 4VWX herring being conducted in Moncton (NB) (DFO Gulf Region) rather than in DFO Maritimes Region at a more appropriate location. The chair responded that the decision to review four pelagic stocks in one meeting was to facilitate the participation of scientists from multiple DFO regions to assist in the science review as well as to facilitate the participation of members from FRCC, the latter presently tasked with reviewing herring management in eastern Canada. As for the rules regarding participation, they were consistent with DFO CSAS policy on participation at science review meetings.

The chair reviewed the terms of reference for the meeting. A review of the assessment framework for 4VWX herring was initiated in 2006. Two of the three components of the framework review have been completed (review of stock structure and fishery data inputs; review of indices of abundance including acoustic survey). During the framework review, a problem with consistency of ageing of herring otoliths was identified. Until this was resolved, progress on the third component, review of models to determine stock status, productivity, and harvest implications of management options was not possible. The assessment would therefore be conducted using the same approach as in 2007 (see Advisory Report 2007/023), i.e. no age structured analysis, no VPA, information based on size structure, acoustic estimates of survey biomass, and an assessment of the stock relative to management objectives.

The draft agenda for the review of herring in 4VWX was reviewed and accepted (Appendix 7). Four working papers were identified for review:

- Review of herring annual growth increment in size by Melvin and Power.
- Herring Ageing: Bomb Radiocarbon and Dominant Year-class Tracking Studies in 4WX by Melvin, Campana and Power.
- Summary of the 2007 Herring Acoustic Surveys in NAFO Divisions 4VWX by Power and Melvin
- 2008 Evaluation of 4VWX Herring by Power, Fife, Knox and Melvin (distributed at the meeting).

2008 EVALUATION OF 4VWX HERRING FISHERY

For the purposes of evaluation, the 4VWX herring fisheries are divided into four components: SW Nova Scotia/Bay of Fundy, offshore Scotian Shelf banks, coastal Nova Scotia, and southwest New Brunswick migrant juveniles.

Mike Power began by providing fishery statistics from the 2007 fishery in SW Nova Scotia / Bay of Fundy. The fishery year is from October to October and the TAC was set at 50,000 t. The fishery is mostly by purse seine. The fishery occurs over several specific areas: Scots Bay, German Bank, Gannet Dry Ledge, Trinity and from Nova Scotia weirs. Almost all herring sampling is provided by industry; in terms of length sampling, 1100 samples were collected by industry, 200 were completed by DFO from either research surveys, by observers, or specific own sampling trips. Sampling coverage is over the entire fishery.

This was followed by a presentation by Jay Lugar, from the Herring Science Council (HSC). This industry-operated organization coordinates most of the data collections including acoustic and ancillary (fat content) data which are provided to DFO Science. In 2007, the council hired a consultant to assist in the editing of the acoustic data. The view from the industry is that there was good condition of herring at plant level, with good availability of herring of all sizes. Industry seiners did 51 separate nights for acoustic surveys. HSC has prepared a number of joint proposals to improve the science being collected with areas of focus including acoustic accuracy, turnover/timing of spawning, studies on blind spot of acoustic data, all linked to questions of stock delineation. DFO Science thanked the HSC for continued efforts and important contributions to the assessments.

The fishery performance for 2007 was reviewed. There were low proportions of fish in the 23 to 27 cm size group and the proportion of fish > 30 cm was still less than 5%. There was a noted increase in the proportion of fish < 23 cm.

REVIEW OF HERRING ANNUAL GROWTH INCREMENT IN SIZE

Length frequency samples from the 2006/2007 herring fishery indicate that there was a substantial increase in the percent of fish >30cm. The question addressed was whether the size distribution of herring observed in 2007 could be derived from the 2006 fish growing or must other factors be considered (e.g., immigration from elsewhere, change in size selectivity of fishing patterns, etc.).

The questions which arose after the presentation were related to the two main hypotheses: 1) that the increase was due to growth, 2) that the increase was not explainable by growth alone and must have occurred by emigration or other factors.

Although movement of fish could not be discounted as an explanation of the change in size, it was possible for annual growth to have resulted in the increased abundance of larger fish in 2007 relative to 2006.

HERRING AGEING: BOMB RADIOCARBON AND DOMINANT YEAR-CLASS TRACKING STUDIES IN 4VWX

The results from previous investigations indicated that the inconsistencies in the ageing of 4VWX herring might have a profound impact on the age based assessment models. Given the potential unknown extent and uncertainty in the ages used to develop the 4VWX herring catch-at-age and age disaggregated index of abundance, the assessment analysis using the VPA age-based model was suspended until the issue could be resolved.

An independent review recommended two new studies to assist in resolving the age interpretation discrepancies: 1) a Bomb Radiocarbon (BRC) age validation study, 2) an otolith exchange to see if a dominant year class could be tracked as it moved through the fishery.

A Canada/USA workshop was held in January 2008 to discuss the ageing issues and the preliminary findings of these studies. The results from each study and the general recommendations from the workshop were provided in the working paper and as an update to the participants at the meeting.

A number of recommendations evolved from the 2008 ageing workshop. These include use of a new mounting medium for the otoliths, the absence of length during the reading process, a

reference collection for quality control, and a few new ageing protocols. These practices will improve the ageing in future years. It is likely that a significant number of the 4VWX herring otoliths will have to be re-read following the new protocols and quality control procedures and at a bare minimum it was recommended that the otoliths be re-read back to 1997 and preferably back to the late 1980's. Once the otoliths have been re-read a new catch at age and age-disaggregated index of abundance will have to be constructed for input into a VPA. The tentative schedule for the readings was to have it completed by December 2008, dependent upon the availability of a reader and procurement of some new equipment.

Additional points raised during the discussions included: the maximum difference in age obtained was considered to be two years, there was a consistent decrease in the abundance of large fish in the catches which cannot be attributed exclusively to ageing inconsistencies, under-ageing of fish exaggerates the slope of the catch curve resulting in overestimates of fishing mortality.

This working paper was presented as an update of work to resolve the ageing inconsistencies issue. The working paper was not to be upgraded to research document. It would be reviewed further at subsequent framework meetings.

2007 HERRING ACOUSTIC SURVEYS IN NAFO DIVISIONS 4VWX

The primary tool of assessment is inseason acoustic surveys delivered by industry which provides all of the survey platforms (vessels), most of the equipment and dedicated the time to execute the surveys. The survey design and protocols follow the recommendations of the previous framework review of acoustic surveys. Data processing was largely provided by the Herring Science Council. The individual survey results have been reported previously to industry collaborators. The full detailed reports were provided as appendices at the meeting.

Only the discussions with the presentation and interpretation of results are provided below.

SW Nova Scotia / Bay of Fundy

The Scots Bay survey is difficult to deliver adequately. There are only 3 to 4 boats available to survey an area over 600 km^2. There is an insufficient number of transects for the area. The boats are forced to move with the tides due to the strength of the currents. When fishing, the boats reported schools of fish between transects. The estimate for Scot's Bay is a minimum amount of biomass because the survey design is inadequate to detect fish in such small aggregations between transects in Scots Bay.

There was a large amount of discussion on the turnover rates of herring on spawning beds. The acoustic surveys rely on a 10-14 day interval for surveying, to avoid double counting of fish, and as recommended during the previous framework reviews. Some participants indicated that based on tagging in other areas, herring could stay on a spawning bed for much longer periods whereas other participants indicated that there were shorter turnover rates, especially towards the end of the season when several spawning waves could arrive and depart within the 10-14 day sampling interval.

It was indicated that the biomass estimates were presented in two forms: derived using an integration calibration factor (ICF) (to account for the non-square waveform observed in a ball calibration) and derived from the uncorrected values. Values derived with ICF are considered to be more accurate estimates of biomass than the uncorrected values and in some areas, the

difference between the two estimates is becoming more important. ICF corrected values are not available prior to 2003, therefore, comparisons between years were made using only data calculated without the ICF correction. Efforts are ongoing to derive ICF corrected values for the previous years for all vessels.

In closing, industry participants encouraged a more frequent presence of DFO scientists on fishing vessels during the surveys.

Offshore Scotian Shelf banks

In 2007, there were equal proportions of purse seine and midwater trawl catches. Overall, the weather was unfavorable during the fishing period. There was a small amount of bycatch and the size composition was large in both the landings and data from the research trawl survey. The trawl survey index shows record low abundance but it is not considered to be an indicator of abundance for herring. Landings in 2007 were below the average, and the allocation for the area of 12,000 t, has not taken in recent years. All sizes of herring are caught, with a good proportion over 30 cm, consistent to previous years (27% to 30% of catch is > 30 cm).

It was indicated by industry participants that the midwater trawl caught fish which would have been close to the bottom. These fish were not available to the purse seine except for a very short time when they came off the bottom.

Another participant indicated that the catches in the area were lower in 2007 because the midwater trawl fleet (single active vessel) disrupted the schools. The midwater trawler was exploring for mackerel but had high bycatch of herring and the vessel was eventually restricted from further fishing. All acoustic data from the midwater trawl vessel was not considered to be of good quality or collected using a specified design to make it usable for assessment.

Coastal Nova Scotia

The fishery and the biomass estimates for this area were low in 2007. Length sampling was good. Multipanel net sampling was conducted during the season to obtain a complete size distribution for acoustic estimation and for maturity monitoring to confirm that spawning was taking place; spent roe was seen in some of the samples.

Industry participants provided a number of insights relative to the fishery in this area in 2007. Fish were considered to be spending little time on the grounds and they did not see waves of fish, only a gradual movement. Fish were farther east and Eastern Passage boats were landing at other points along the coast. The bulk of the fish were caught in a short and late period of time. Other participants indicated that more fish would have been caught if there had been a market.

Reference was also made to seals having an impact on herring behaviour. When fish were coming in to spawn, they were spawning quickly and returning back to deeper water, spending little time on spawning grounds. There were lots of seals observed on rocks and it was the contention from participants that seals were keeping the fish moving. These factors may also contribute to poorer surveys with the herring less available during the acoustic survey.

Southwest New Brunswick migrant juveniles

In 2006, the fishery landed primarily herring from the 2005 year class, especially later in the year. This continued on into January 2007, with a single mode being caught. Landings for 2007 were 30,900 t, well above long term average of 24,000 t. The 2007 mode of 17 to 21 cm was ideal canner size, with 95% of the catch being less than 23 cm. These catches are not included in SW Nova catch but are accounted for in the Gulf of Maine assessment. The age composition was presumed to be predominantly age 2. Large catches in the NB weir fishery in 1980 did not translate into a big year class in SW Nova stock component.

The juveniles in this fishery are assumed to be from Area 5Y. Some of those fish may also contain 4VWX juveniles but yearclasses from this fishery have not tracked with herring in SW Nova.

REVIEW OF DRAFT SCIENCE ADVISORY REPORT

The draft science advisory report (SAR) was circulated to the meeting participants and reviewed in its entirety during the meeting. A number of edits and clarifications were made to the text, tables and figures in the draft SAR. The following comments capture the major points of discussion related to the assessment of status relative to some of the management objectives.

Objective: persistence of spawning: not met

The best spawning area is presently German Bank. Seal Island and Trinity Ledge are not rebuilding and some participants indicated that increased abundance of grey seals in these areas is limiting the rebuilding of herring in those areas. Although it is possible that Seal Island may be difficult to re-establish because of build up of marine mammals, the fact is it has not re-established and it was a major spawning area in the late 1980s. Lurcher was included as an area in 2003 when fish were observed to have returned.

Objective: maintain broad age composition – improved abundance of 30cm but age is still assumed to be truncated

There is a sign of a possible strong year class as evidenced in the catches of herring 18 - 22 cm. There was evidence based on weir fishery that they did recruit into the fishery. There is a progression of large fish to the right of the length distribution in the catches. The presence of so many fish of this length in the weir catches makes it different compared to 2006. Although the industry stated that the fish were easier to catch, this does not mean they were more abundant. The scientific team hesitated to state that there was evidence of a strong year class because there is no reliable index of abundance. Good catches in weirs can or cannot indicate year class strength as evidenced from previous years. It was agreed that it could be stated that possibly a strong year class was coming in but it remained to be confirmed.

Fishing mortality at or below F0.1 - fishing mortality was not determined but appears to be decreasing.

Fishing mortality rate is not estimated for any of the spawning components and it is unknown where they are relative to the $F_{0.1}$ objective. But based on the biomass estimated from acoustic surveys and the landings from the various components, it was concluded that the relative fishing mortality rates were declining.

Uncertainties section of the advisory report

It was indicated that all the uncertainties with the acoustic survey be included. The list of factors from the framework meeting could be used here to properly capture the range of effects each factor could have on the estimate of biomass.

CONCLUDING STATEMENTS ON STATUS

The advisory report should contain a statement of the benefits of management measures in place over the previous years now being manifested in the stocks. The caveat being that there is also a potential for more productivity from this resource, based on history and that one should still be cautious about positive signals and any relaxing of rebuilding measures.

Specifically for Offshore Scotian Shelf

Questions were raised about the rationale for the 12,000 t TAC. Historically, catch levels of 40 to 50 thousand t led to a decline. The initial allocation was to promote exploration. Provision was in the plan that if an acoustic survey was done and large quantities of fish were observed, an increase could be considered. A change in the TAC level of 12,000 t would be considered only if there was a survey to document the abundance of fish with adequate sampling for size and maturity.

RESEARCH DOCUMENTS TO BE PRODUCED FROM THE MEETING

Two research documents were to be developed from the meeting:
1) Power et al. Summary of the 2007 Herring Acoustic Surveys in NAFO Divisions 4VWX
2) Power et al. 2008 Evaluation of 4VWX Herring (which would include the information from the working paper on herring annual growth increment in size).

The working paper on update of work to resolve the ageing inconsistencies issue was not to be upgraded to research document as it would be reviewed further at subsequent framework meetings.

EVALUATION OF SCIENCE ADVISORY PROCESS

Before closing the meeting, the chair circulated an evaluation form for the science review meeting just completed. The evaluation is an important part of the process and is intended to improve on future reviews in order to deliver better advice. The survey questions and results are presented in Appendix 8.

Only eight participants provided feedback on the evaluation form, six of these were from industry. The most consistent comments received from industry participants reflected their disagreement for having conducted a joint assessment meeting with other stocks. Low scores were provided for the question of having received the documents in sufficient time for review. As for possible changes to the advisory process, there was a strong sentiment that the science review should include non-science people, that observers should be allowed, and there was little enthusiasm for training courses to assist participants in the understanding of the technical details.

The meeting ended at 6:15 PM.

Appendix 1. *Notification letter sent to industry regarding the science review of March 17-20, 2008.*

Gulf Region
Oceans and Science Branch
343 Université Avenue
Moncton N.B.
E1C 9B6

February 21, 2008

Distribution

Subject: Scientific review of herring, capelin, and mackerel stocks

To ensure that Department of Fisheries and Oceans Science Branch (DFO Science) meets its scientific advisory responsibilities fully, a scientific review of the status of several pelagic fish stocks will be conducted at the Gulf Fisheries Centre, in Moncton (NB), March 17 to 20, 2008.

The fish stocks to be reviewed are as follows (see Annexes A, B):

4VWX Herring : March 17

4T Herring : March 18 and 19

4RST Capelin : March 19

Mackerel Zones 3 & 4 : March 20

At this time, I am soliciting nominations from the fishing industry associations for participants to these upcoming reviews.

To ensure a working meeting, participation at the science review meeting will be limited to one individual per association. Individuals may participate at one specific review or several. The science review meeting is not open to the public and participation is restricted to those individuals nominated by their associations and subsequently approved by the meeting chair.

The name of the nominated participant from

Région du Golfe
Direction des Océans et des Sciences
343 avenue Université
Moncton (N.-B.)
E1C 9B6

le 21 février 2008

Liste de diffusion

Objet : Examen scientifique des stocks de hareng, capelan et maquereau

Afin de s'assurer que le secteur des Sciences du Ministère des Pêches et des Océans respectent ses obligations dans la livraison d'avis scientifiques, un examen scientifique de l'état de plusieurs stocks de poissons pélagiques est prévu du 17 au 20 mars, 2008, au Centre des Pêches du Golfe, à Moncton (N.-B.)

Les stocks de poissons qui feront l'objet d'une revue sont les suivants (voir Annexes A et B) :

4VWX hareng ; le 17 mars

4T hareng : les 18 et 19 mars

4RST capelan : le 19 mars

Maquereau zones 3 et 4 : le 20 mars

Par la présente, je sollicite des nominations du secteur des pêches pour les participants à ces revues anticipées.

Afin d'assurer un niveau opérationnel efficace, la participation à la revue scientifique sera limitée à un participant par association. Les individus nommés peuvent participer à une ou plusieurs des revues durant la semaine. La revue des sciences n'est pas ouverte au public et la participation est restreinte aux participants ayant été nommés par leur association et approuvés par le président de la réunion.

La nomination d'un participant de votre association

your association must be received by DFO Science by **midnight, March 6, 2008**. The name and contact coordinates may be sent by telephone, fax, email or by letter, to the attention of the science advisory process coordinator as indicated at the end of this letter.

Please indicate the specific review which the participant will be attending and whether simultaneous translation will be required during the meeting. The 4VWX herring assessment documents will be available in English only, the 4T herring and the capelin and mackerel assessment documents will be available in bilingual format.

If we do not receive a nomination by the deadline, we will assume that no one from your association is available for the science review meeting.

Only the nominated participant from the association will be allowed to attend the meeting. The meeting is a scientific review and the information and discussions will be technical in detail. Participants are expected to be knowledgeable in the information and the methods used to address the issues in question and able to contribute fully to the discussions and interpretations of data and analyses.

The meeting is a science review meeting and not a forum for discussing fisheries allocations or debating management questions.

The DFO scientific review process makes a distinction between a participant and a representative. Participants are not at the review meeting as advocates or representatives of interest groups but are expected to participate fully in the decision-making of the science meeting. As such, participation at the science meeting is by invitation of the meeting chair.

doit être reçue au secteur Science MPO avant **minuit, le 6 mars 2008**. Vous pouvez soumettre le nom et les coordonnées de l'individu par téléphone, télécopieur, courriel or par lettre, à l'attention du coordonnateur du processus de revue scientifique, aux coordonnées indiquées au bas de cette lettre.

S'il vous plait indiquer la revue à laquelle l'individu participera et si la traduction simultanée durant la réunion est requise. Les documents d'évaluation du stock de hareng de 4VWX seront disponibles en anglais seulement tandis que les documents du hareng de 4T ainsi que du capelan et maquereau seront disponibles en format bilingue.

Si nous ne recevons pas de nomination à la date limite, nous allons conclure que personne de votre association n'est disponible pour participer à la revue scientifique.

Seul le participant nommé pourra participer à la réunion. La réunion est une revue scientifique et les informations et discussions seront de nature technique. Les participants à la revue scientifique doivent bien connaître l'information et les méthodes reliées aux questions examinées. En outre, ils doivent pouvoir contribuer pleinement aux discussions et interprétations des données et des analyses.

La réunion est une revue scientifique et non pas l'occasion pour discuter de l'allocation des ressources ni pour débattre des questions reliées à la gestion.

Le processus de revue scientifique du MPO fait une distinction entre un participant et un représentant. Les participants à la revue scientifique n'agissent pas en temps que défenseurs des droits ou des représentants d'un groupe d'intérêt. Les participants doivent s'attendre à participer pleinement au processus de prise de décisions pendant la réunion. Ainsi, la participation aux réunions de revue scientifique est à l'invitation du président de la réunion.

I have attached in Annex C to this letter, a copy of the principles and guidelines for participation in peer review processes. The scientific peer review process policy conforms to a number Government of Canada policies on the provision of science advice and the Social Union Contract. You may view the policy at the following internet address:

http://www.dfo-mpo.gc.ca/csas/Csas/Home-Accueil_e.htm

As background to the upcoming scientific reviews, you may refer to the science advisory reports and research documents from the previous meetings available at the Canadian Science Advisory Secretariat website:

http://www.dfo-mpo.gc.ca/csas/csas/Publications/Pub_Index_e.htm

The terms of reference for the scientific review, the meeting agenda, and the working documents will be distributed to the participants at the latest March 11, 2008. Simultaneous translation will be provided during the review meetings with the exception of Monday March 17 for 4VWX herring which will be conducted in English only.

All questions and comments should be forwarded to the coordinator of the Scientific Advisory Process.

Vous trouverez une copie des principes et lignes directrices régissant la participation aux processus d'examen par des pairs à l'annexe C. La politique pour le processus de revue scientifique se situe dans le contexte général de politiques du Gouvernement du Canada pour la provision d'avis scientifique et dans le contrat d'union sociale. Vous pouvez lire la politique en entier à l'adresse suivante :

http://www.dfo-mpo.gc.ca/csas/Csas/Home-Accueil_f.htm

Pour obtenir plus d'information concernant les prochaines revues, vous pouvez obtenir les avis scientifiques et les documents de recherches associés aux revues des années antérieures. Ces documents sont disponibles sur le site du Secrétariat Canadien de Consultation scientifique :

http://www.dfo-mpo.gc.ca/csas/csas/Publications/Pub_Index_f.htm

Le mandat de la revue scientifique, l'ordre du jour de la réunion et les documents de travail seront distribués aux participants au plus tard le 11 mars 2008. La traduction simultanée sera offerte durant la réunion de la revue scientifique, sauf pour la journée de lundi, 17 mars pour la revue du stock de hareng 4VWX qui se tiendra uniquement en anglais.

Tous commentaires ou questions sur cette notification devraient être adressés au coordonnateur du processus de revue scientifique.

Gérald Chaput

Coordinator
Scientific Advisory Process
Oceans and Science Branch
Gulf Region

Coordonnateur
Processus de revue scientifique
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Appendix 1 (continued). *Notification letter sent to industry regarding the science review of March 17-20, 2008.*

Annex A. Agenda	
Monday 17 March	
8 :30 AM to 5 :30 PM	4VWX Herring
Tuesday 18 March	
8:30 AM to 5:00 PM	4T Herring
Wednesday 19 March	
8:30 AM to 12:00 PM	4T Herring
1:00 PM to 5:30 PM	4RST Capelin
Thursday 20 March	
8:30 AM to 5:00 PM	Mackerel Zones 3&4

Annexe A. Ordre du jour	
Lundi le 17 mars	
8h30 à 17h30	4VWX Hareng
Mardi le 18 mars	
8h30 à 17h00	4T Hareng
Mercredi le 19 mars	
8h30 à 12h00	4T Hareng
13h00 à 17h30	4RST Capelan
Jeudi le 20 mars	
8h30 à 17h00	Maquereau Zones 3&4

Appendix 1 (continued). *Notification letter sent to industry regarding the science review of March 17-20, 2008.*

Appendix C. Operational guidelines http://www.dfo-mpo.gc.ca/csas/csas/Process-Processus/Process-Processus_e.htm	**Annexe C. Lignes directrices opérationnelles** http://www.dfo-mpo.gc.ca/csas/csas/Process-Processus/Process-Processus_f.htm
Principles and Guidelines for participation in peer review processes	**Principes et lignes directrices régissant la participation aux processus d'examen par des pairs**
The goal of DFO's Science review and advisory processes is to provide quality control through peer review of information, and (where mandated to Science Branch) scientific advice, with the overall objective of providing the best possible science to the Minister, managers, Management Boards, stakeholders and the public. To fit within the policy framework of the Canadian government, our reviews must be rigorous, reliable, and relevant, and be conducted in a manner which is objective, open, and transparent.	Les processus d'examen et de consultation du Secteur des sciences du MPO ont pour but d'assurer un contrôle de qualité en faisant l'examen de l'information (lorsque demandé à l'une des directions du Secteur des sciences) et des avis scientifiques par des pairs, dans le but général de donner les meilleurs renseignements scientifiques possibles au Ministre, aux gestionnaires, aux conseils de gestion, aux intervenants et au grand public. Pour que nos examens s'inscrivent dans le cadre stratégique du gouvernement canadien, ils doivent être rigoureux, fiables, pertinents et doivent être menés avec objectivité, ouverture et transparence.
Participants are not intended to come to RAP meetings merely to be informed about conclusions on science questions, including status of stocks, habitats, or ecosystems already reached elsewhere; nor to be sector representatives, promoting advocacy positions on either science issues or management measures. Stakeholders learn about the results of stock, habitat, or ecosystems assessments through our normal communication and advisory mechanisms, and have opportunities to express partisan views on science issues and management decisions through Conservation Councils and advisory committees.	**Les participants ne sont pas censés venir aux réunions reliées au PCR simplement pour être informés des conclusions déjà tirées ailleurs au sujet de questions scientifiques** telles que l'état des stocks, les habitats ou les écosystèmes, ni pour agir à titre de représentants de secteur en prenant des positions de défense des droits relativement à des questions scientifiques ou à des mesures de gestion. Les intervenants sont informés des résultats des évaluations des stocks, des habitats ou des écosystèmes par le biais de nos mécanismes habituels de communications et de consultations. De plus, ils ont la chance de faire connaître leurs opinions partisanes au sujet de questions scientifiques et de décisions reliées à la gestion par l'entremise des conseils de conservation et des comités consultatifs.
Peer review meetings are intended to be a forum for challenge and review of scientific information, often including traditional or users knowledge, leading to objective consensus, such that reviewed information products and advice can be communicated widely, and recipients can be confident of their	**Les réunions d'examen par des pairs servent de forum où l'on peut contester et examiner l'information scientifique**, comprenant souvent les connaissances traditionnelles ou les connaissances des utilisateurs, en vue d'arriver à un consensus objectif de telle sorte que les produits d'information examinés et les conseils puissent être communiqués

reliability. The quality control function cannot be separated from the RAP process. If a technical review were to be inserted as a separate step in the overall assessment and advisory process, it too would have to meet the government policies on openness and transparency as well as rigour and objectivity. This would not just greatly increase workload and expense, but call into question the rationale for holding following meetings under the name RAP. Hence, RAP is to include both the technical review and development of advice.	de façon générale et que les bénéficiaires puissent avoir confiance en leur fiabilité. On ne peut pas séparer la fonction de contrôle de la qualité du PCR. Si l'on devait ajouter un examen technique comme étape distincte au processus global d'évaluation et de consultation, cet examen devrait lui aussi respecter les politiques gouvernementales au sujet de l'ouverture et de la transparence ainsi que de la rigueur et de l'objectivité. Non seulement une telle façon de procéder augmenterait-elle considérablement la charge de travail et les dépenses, mais elle remettrait aussi en question la raison d'être de tenir les réunions suivantes sous le vocable de PCR. Le PCR devrait donc comprendre à la fois l'examen technique et l'élaboration de conseils.
To be accepted widely as open and transparent, **RAP requires the participation of individuals from outside the employ of government**. Hence, external participants will normally be included in all RAP meetings. However, government policy documents are clear that "open and transparent" does not require unrestricted public participation. Meetings must above all be structured to do their work efficiently, and to maintain highest achievable standards of rigour and objectivity. They also must work in harmony with the rights and responsibilities of Regional Management Boards in the North.	Pour que le PCR soit reconnu de façon générale comme étant ouvert et transparent, il nécessite la participation de personnes qui ne sont pas des employés du gouvernement. Par conséquent, **des participants de l'extérieur assisteront habituellement à toutes les réunions s'inscrivant dans le cadre du PCR**. Toutefois, les documents de la politique gouvernementale stipulent clairement que l'expression « ouvert et transparent » ne veut pas dire une participation sans limite du grand public. D'abord et avant tout, les réunions doivent être structurées pour être efficaces et atteindre les normes les plus élevées possibles au chapitre de la rigueur et de l'objectivité. Elles doivent aussi être harmonisées aux droits et aux responsabilités des conseils de gestion régionaux dans le Nord.
To be rigorous and reliable, **participants must be knowledgeable in information and methods relevant to issues being reviewed.** Relevant expertise is commonly available in academic institutions and research centers in other Regions and countries. In many instances individuals with traditional or users' knowledge of the resources or ecosystems of concern will also have relevant knowledge and perspectives to contribute, as may individuals from non-government public interest groups. Participants can be sought from all three sources, as appropriate for the agenda of any particular meeting.	Pour contribuer de façon pertinente, **les participants doivent bien connaître l'information et les méthodes reliées aux questions examinées.** Il est habituellement facile d'avoir accès à une expertise pertinente dans les établissements universitaires et dans les centres de recherche d'autres régions et pays. Dans bien des cas, les personnes ayant des connaissances traditionnelles ou des connaissances d'utilisateur des ressources ou des écosystèmes d'intérêt disposeront aussi des connaissances et de l'expertise pertinentes pour contribuer, tout comme ce peut être le cas de personnes faisant partie de groupes de défense non gouvernementaux de l'intérêt public. Les participants peuvent donc provenir des trois sources, suivant ce que dicte l'ordre du jour d'une réunion.
To be objective and impartial, participants must	Pour être objectifs et impartiaux, les participants

appreciate the nature of peer review, their role as contributors of knowledge and perspective, and their role in controlling the quality of all information provided to the meeting through constructive criticism and search for consensus. **Participants are not advocates or representatives for any interest group, but are expected to participate as knowledgeable individuals.** To fulfill their roles, invited participants must actually participate actively. RAP meetings should be designed and conducted in ways which are not adversarial, but all participants should be prepared to have their contributions challenged in constructive ways.	doivent être conscients de la nature de l'examen par les pairs, de leur rôle comme source de connaissances et d'expertise et de leur rôle au niveau du contrôle de la qualité de tous les renseignements fournis pendant la réunion par le biais de critiques constructives et de la recherche d'un consensus. **Les participants ne sont pas des défenseurs des droits ou des représentants d'un groupe d'intérêt, mais on s'attend à ce qu'ils participent comme personnes bien informées.** Pour bien assumer leurs rôles, les participants invités doivent réellement participer activement. Les réunions du PCR devraient être conçues et dirigées de façon non conflictuelle, mais tous les participants devraient s'attendre à ce que l'on puisse y remettre en question leurs opinions de façon constructive.
These considerations generally mean that the **number of participants should be kept workable** , and individuals should not feel they are on display to their peers, the media, or any other audience. Moreover, as the Social Union Contract stresses, those who are included as participants can expect to participate fully in the decision-making of the meeting , and not just be informed passively by observing the presentations and discussion. Hence all participants should have, and should perceive themselves to have, equal stature at the table.	En règle générale, cela veut donc dire que **le nombre de participants devrait être limité à un niveau opérationnel** et ceux-ci ne devraient pas se sentir comme s'ils étaient en démonstration devant leurs pairs, les médias ou tout autre public. Par ailleurs, comme on le souligne dans le contrat d'union sociale, les participants peuvent s'attendre à participer pleinement au processus de prise de décisions pendant les réunions et non seulement à être informés de façon passive en observant les exposés et les discussions. Ainsi, tous les participants devraient avoir un statut égal à la réunion et ils devraient se percevoir comme tels.
External participation will be by invitation. Invitations will be issued to individuals who are knowledgeable, at ease with meeting situations, and widely respected by their peer groups. A track record of past constructive participation in RAP or collaborative programs with DFO are often a good indicator that the invitee will respect the objectives and procedures of the meeting. The diversity of invitees should cover appropriately the diversity of perspectives and experience on agenda items. The exact mix and number of invitees will vary according to the agenda of a meeting, with larger meetings, of course, likely to have more invited participants.	**Les personnes de l'extérieur participeront sur invitation.** On invitera des personnes qui sont bien renseignées, à l'aise dans le contexte de réunions et respectées de façon générale par des groupes de pairs. Si une personne a des antécédents de participation constructive au PCR ou aux programmes de collaboration au sein du MPO, il s'agit souvent d'un bon indice permettant de croire qu'elle respectera les objectifs et les procédures de la réunion. La diversité des invités devrait correspondre approximativement à la diversité des perspectives et de l'expérience reliées aux éléments inscrits à l'ordre du jour. La combinaison et le nombre exacts des invités varieront en fonction de l'ordre du jour d'une réunion. Il est évident que les réunions plus importantes nécessiteront probablement un plus grand nombre de participants invités.
Invitations should be written, and where necessary (for example, where meeting	Les invitations devraient être faites par écrit. De plus, lorsque c'est nécessaire (par exemple, lorsque

conclusions affect the value of transferable access rights to fisheries) may include a requirement for confidentiality with regard to meeting conclusions until a specified date when meeting results will be released. Specific methods for selecting invitees may be set at the Region (for Regional RAPs), respecting the role and authority of Regional Management Boards in the North.	les conclusions d'une réunion influencent la valeur des droits d'accès transférables aux pêches), on peut demander aux invités de respecter le caractère confidentiel des conclusions tirées à la fin d'une réunion jusqu'à une date précise à laquelle les résultats de la réunion seront rendus publics. Le bureau régional peut établir (pour les PCR) des méthodes précises en vue de choisir les invités tout en respectant le rôle et les pouvoirs des conseils de gestion régionaux dans le Nord.
Chairs of RAP meetings are responsible for issuing invitations and for ensuring that the guidelines for participants are observed. Chairs should remind participants of the guidelines during the meeting. Chairs may call participants to order and may, if deemed essential to the professional conduct of the meeting, call for participants to leave the meeting.	**Les présidents des réunions reliées au PCR doivent envoyer les invitations et s'assurer que les participants respectent les lignes directrices.** Pendant la réunion, les présidents devraient rappeler les lignes directrices aux participants. Les présidents peuvent rappeler les participants à l'ordre et peuvent, si on le juge essentiel au déroulement professionnel de la réunion, demander aux participants de quitter la salle.

Appendix 2. *Notification letter sent to Aboriginal peoples regarding the science review of March 17-20, 2008.*

Gulf Region
Oceans and Science Branch
343 Université Avenue
Moncton N.B.
E1C 9B6

February 21, 2008

Distribution

Subject: Scientific review of herring, capelin, and mackerel stocks

To ensure that Department of Fisheries and Oceans Science Branch (DFO Science) meets its scientific advisory responsibilities fully, a scientific review of the status of several pelagic fish stocks will be conducted at the Gulf Fisheries Centre, in Moncton (NB), March 17 to 20, 2008.

The fish stocks to be reviewed are as follows (see Annexes A & B):

4VWX Herring : March 17

4T Herring : March 18 and 19

4RST Capelin : March 19

Mackerel Zones 3 & 4 : March 20

At this time, I am soliciting nominations from interested aboriginal communities for participants to these upcoming reviews.

To ensure a working meeting, participation at the science review meeting will be limited to one individual per community. Individuals may participate at one specific review or several. The science review meeting is not open to the public and participation is restricted to those individuals nominated by their communities and subsequently approved by the meeting chair.

Région du Golfe
Direction des Océans et des Sciences
343 avenue Université
Moncton (N.-B.)
E1C 9B6

le 21 février 2008

Liste de diffusion

Objet : Examen scientifique des stocks de hareng, capelan et maquereau

Afin de s'assurer que le secteur des Sciences du Ministère des Pêches et des Océans respectent ses obligations dans la livraison d'avis scientifiques, un examen scientifique de l'état de plusieurs stocks de poissons pélagiques est prévu du 17 au 20 mars, 2008, au Centre des Pêches du Golfe, à Moncton (N.-B.)

Les stocks de poissons qui feront l'objet d'une revue sont les suivants (voir Annexes A et B) :

4VWX hareng ; le 17 mars

4T hareng : les 18 et 19 mars

4RST capelan : le 19 mars

Maquereau zones 3 et 4 : le 20 mars

Par la présente, je sollicite des nominations des communautés autochtones intéressées à participer à ces prochaines revues.

Afin d'assurer un niveau opérationnel efficace, la participation à la revue scientifique sera limitée à un participant par communauté. Les individus nommés peuvent participer à une ou plusieurs des revues durant la semaine. La revue des sciences n'est pas ouverte au public et la participation est restreinte aux participants ayant été nommés par leur communauté et approuvés par le président de la réunion.

The name of the nominated participant must be received by DFO Science by **midnight, March 6, 2008**. The name and contact coordinates may be sent by telephone, fax, email or by letter, to the attention of the science advisory process coordinator as indicated at the end of this letter.

La nomination d'un participant doit être reçue au secteur Science MPO avant **minuit, le 6 mars 2008**. Vous pouvez soumettre le nom et les coordonnées de l'individu par téléphone, télécopieur, courriel or par lettre, à l'attention du coordonnateur du processus de revue scientifique, aux coordonnées indiquées au bas de cette lettre.

Please indicate the specific review which the participant will be attending and whether simultaneous translation will be required during the meeting. The 4VWX herring assessment documents will be available in English only, the 4T herring and the capelin and mackerel assessment documents will be available in bilingual format.

S'il vous plait indiquer la revue à laquelle l'individu participera et si la traduction simultanée durant la réunion est requise. Les documents d'évaluation du stock de hareng de 4VWX seront disponibles en anglais seulement tandis que les documents du hareng de 4T ainsi que du capelan et maquereau seront disponibles en format bilingue.

If we do not receive a nomination by the deadline, we will assume that no one is available for the science review meeting.

Si nous ne recevons pas de nomination à la date limite, nous allons conclure que personne n'est disponible pour participer à la revue scientifique.

Only the nominated participant from the association will be allowed to attend the meeting. The meeting is a scientific review and the information and discussions will be technical in detail. Participants are expected to be knowledgeable in the information and the methods used to address the issues in question and able to contribute fully to the discussions and interpretations of data and analyses.

Seul le participant nommé pourra participer à la réunion. La réunion est une revue scientifique et les informations et discussions seront de nature technique. Les participants à la revue scientifique doivent bien connaître l'information et les méthodes reliées aux questions examinées. En outre, ils doivent pouvoir contribuer pleinement aux discussions et interprétations des données et des analyses.

The meeting is a science review meeting and not a forum for discussing fisheries allocations or debating management questions.

La réunion est une revue scientifique et non pas l'occasion pour discuter de l'allocation des ressources ni pour débattre des questions reliées à la gestion.

The DFO scientific review process makes a distinction between a participant and a representative. Participants are not at the review meeting as advocates or representatives of interest groups but are expected to participate fully in the decision-making of the science meeting. As such, participation at the science meeting is by invitation of the meeting chair.

Le processus de revue scientifique du MPO fait une distinction entre un participant et un représentant. Les participants à la revue scientifique n'agissent pas en temps que défenseurs des droits ou des représentants d'un groupe d'intérêt. Les participants doivent s'attendre à participer pleinement au processus de prise de décisions pendant la réunion. Ainsi, la participation aux réunions de revue scientifique est à l'invitation du président de la réunion.

I have attached in Annex B to this letter, a copy of the principles and guidelines for participation in peer review processes. The scientific peer review process policy conforms to a number Government of Canada policies on the provision of science advice and the Social Union Contract. You may view the policy at the following internet address:

http://www.dfo-mpo.gc.ca/csas/Csas/Home-Accueil_e.htm

As background to the upcoming scientific reviews, you may refer to the science advisory reports and research documents from the previous meetings available at the Canadian Science Advisory Secretariat website:

http://www.dfo-mpo.gc.ca/csas/csas/Publications/Pub_Index_e.htm

The terms of reference for the scientific review, the meeting agenda, and the working documents will be distributed to the participants at the latest March 11, 2008. Simultaneous translation will be provided during the review meetings with the exception of Monday March 17 for 4VWX herring which will be conducted in English only.

All questions and comments should be forwarded to the coordinator of the Scientific Advisory Process.

Vous trouverez une copie des principes et lignes directrices régissant la participation aux processus d'examen par des pairs à l'annexe B. La politique pour le processus de revue scientifique se situe dans le contexte général de politiques du Gouvernement du Canada pour la provision d'avis scientifique et dans le contrat d'union sociale. Vous pouvez lire la politique en entier à l'adresse suivante :

http://www.dfo-mpo.gc.ca/csas/Csas/Home-Accueil_f.htm

Pour obtenir plus d'information concernant les prochaines revues, vous pouvez obtenir les avis scientifiques et les documents de recherches associés aux revues des années antérieures. Ces documents sont disponibles sur le site du Secrétariat Canadien de Consultation scientifique :

http://www.dfo-mpo.gc.ca/csas/csas/Publications/Pub_Index_f.htm

Le mandat de la revue scientifique, l'ordre du jour de la réunion et les documents de travail seront distribués aux participants au plus tard le 11 mars 2008. La traduction simultanée sera offerte durant la réunion de la revue scientifique, sauf pour la journée de lundi, 17 mars pour la revue du stock de hareng 4VWX qui se tiendra uniquement en anglais.

Tous commentaires ou questions sur cette notification devraient être adressés au coordonnateur du processus de revue scientifique.

Gérald Chaput

Coordinator
Scientific Advisory Process
Oceans and Science Branch
Gulf Region

Coordonnateur
Processus de revue scientifique
Direction des océans et des sciences
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CC / cc : M. Chadwick, M. Sinclair, A. Plourde, Julian Goodyear

Appendix 3. *Terms of reference for science review of Atlantic herring from NAFO Division 4WWX, March 17, 2008.*

TERMS OF REFERENCE	CADRE DE RÉFÉRENCE
March 17, 2008	**17 mars 2008**
Science Advisory Process Herring (4VWX)	**Processus consultatif scientifique Hareng (4VWX)**
Context Every winter, Maritimes DFO Fisheries and Aquaculture Management (FAM) requests DFO Science to undertake an assessment of the 4VWX herring management unit in support of the upcoming fishery. A new framework for conducting the annual assessment was initiated in 2006 but has not yet been completed. Thus, the 2008 assessment of the status of 4VWX herring will be conducted using the same assessment approach, as was done in 2007. The goal of the meeting will be to develop stock status conclusions and advice and complete the Science Advisory Report.	**Contexte** Tous les hivers, la Gestion des pêches et de l'aquaculture (GPA) de la Région des Maritimes du MPO demande aux Sciences du MPO de procéder à une évaluation de l'unité de gestion du hareng de 4VWX en vue de la prochaine saison de pêche. On a entrepris d'établir un nouveau cadre pour la réalisation de cette évaluation annuelle en 2006, mais celui n'est pas encore terminé. Par conséquent, l'évaluation de l'état du stock de hareng de 4VWX pour 2008 se fera de la même manière que celle de 2007. La réunion a pour but de formuler des conclusions sur l'état du stock et de produire un Avis scientifique.
Objectives Review and evaluate biological and fishery information on 4VWX herring stock status for establishing the final quota for 2007/2008 fisheries, as required in the Integrated Fisheries Management Plan, including: • Evaluation of the southwest Nova Scotia / Bay of Fundy spawning component,. • Compilation and review of information regarding the offshore Scotian Shelf spawning component and the coastal Nova Scotia spawning component. • Update on southwest New Brunswick migrant juvenile fishery component. • Update of progress to date with ageing studies and workshop held in January 2008. • Analysis of impacts of harvesting on size and age and the long-term effects on biomass. • Recommendations to management regarding catch levels.	**Objectifs** Examiner et évaluer l'information biologique et halieutique sur l'état du stock de hareng de 4VWX en vue d'établir le quota final pour la pêche de 2007-2008, conformément au Plan de gestion intégrée de la pêche. Cela consistera notamment à : • Évaluer la composante de reproducteurs du sud-ouest de la Nouvelle-Écosse et de la baie de Fundy. • Colliger et examiner l'information sur la composante de reproducteurs du large du plateau néo-écossais et sur la composante de reproducteurs des côtes de la Nouvelle-Écosse • Mettre à jour l'information sur la composante de juvéniles migrateurs du sud-ouest du Nouveau-Brunswick. • Faire le point sur les résultats qu'ont donnés jusqu'ici les études et l'atelier de détermination de l'âge de janvier 2008. • Analyser l'incidence des captures sur les tailles et sur les âges, ainsi que sur la biomasse à long terme. • Faire des recommandations à la gestion au sujet des niveaux de prises.

Outputs	**Produits**
• CSAS Science Advisory Report • CSAS Proceedings • CSAS Research Documents summarizing the working papers	• Avis scientifique du SCES • Compte rendu du SCES • Documents de recherche du SCES résumant les documents de travail
Participation The DFO Science assessment team in St. Andrews, N.B. will prepare working papers for review. Meeting participants will be invited from the following: • DFO Science • DFO Fisheries and Aquaculture Management • Provincial government • Fishing industry • Aboriginal communities • FRCC	**Participation** L'équipe d'évaluation scientifique des Sciences du MPO à St. Andrews (N.-B.) préparera les documents de travail à examiner. Les parties suivantes seront invitées à la réunion : • MPO Sciences • MPO Gestion de la Pêche e de l'Aquaculture • Gouvernements provinciaux • Industrie de la pêche • Communautés autochtones • CCRH

Appendix 4. *Notification letter sent to registered participants at the science review of March 17-20, 2008.*

Gulf Region
Oceans and Science Branch
343 Université Avenue
Moncton N.B.
E1C 9B6

March 13, 2008

Distribution

Subject: Documents pertaining to the scientific review of herring stocks of NAFO Division 4VWX

I want to welcome you as a participant to the upcoming scientific review of the status of the herring stock of NAFO Division 4VWX.

I am sending you the terms of reference for the science review as well as a draft agenda.

As you will be a participant for this science review, I am providing you with copies of the working documents (see Annex A) which will be the subject of the scientific review on March 17, 2008. The pre-meeting distribution of these documents is to provide you with an opportunity to review the information, prepare questions and be ready to contribute fully to the science review for this resource.
I have also included the science advisory report for 2006 and other documents which form the basis for the assessment approach for 4VWX herring stock.

Please bring copies of these documents with you as there will limited additional copies for distribution at the meeting.

You may discuss the content of these documents with others if this will help you understand the data and methods and assist in your preparation for the review. I ask you not to copy or distribute the documents. The information is of a preliminary nature, subject to the science review and the conclusions of the review may differ from the content of these documents. This confidentiality principle is

Région du Golfe
Direction des Océans et des Sciences
343 avenue Université
Moncton (N.-B.)
E1C 9B6

le 13 mars 2008

Liste de diffusion

Objet : Documents relatifs à l'examen scientifique des stocks du hareng de la division 4VWX de l'OPANO

Je vous souhaite la bienvenue en temps que participant à l'examen scientifique de l'état des stocks de hareng de la division 4VWX de l'OPANO.
Je vous envoie le mandat de cette revue scientifique et la proposition de l'ordre du jour pour cette revue.

J'envoie à chaque participant de cette revue des sciences une copie des documents (voir Annexe A) qui seront l'objet de l'examen scientifique du 17 mars 2008. La distribution précoce de ces documents à pour but de permettre une meilleur préparation pour la revue. En vous fournissant les informations et les analyses maintenant, vous pourrez préparer les questions et ainsi contribuer pleinement à l'évaluation de cette ressource.
Je vous envoie aussi le document d'avis scientifiques pour 2006 et autres documents qui décrivent l'approche d'évaluation pour les stocks de hareng de 4VWX.

Je vous prie d'apporter avec vous les documents que vous avez reçus car il n'y aura que quelques exemplaires disponible à la réunion.

Vous pouvez discuter du contenu des documents avec d'autres gens si ceci peut vous aider à la compréhension des données et des méthodes et à votre préparation pour cette revue. Cependant, je vous demande de ne pas tirer des copies ou de les distribuer. Les informations contenues dans ces documents sont de nature préliminaire, assujetties à la revue scientifique et les conclusions de la revue pourraient être différentes du contenu des

required to avoid diffusion of potentially erroneous information on the status of this resource.

The discussions held during this review will focus solely on scientific aspects and issues related to the stock assessment. It is not the forum for debating management problems or resource allocation issues.

The DFO scientific review process makes a distinction between a participant and a representative. As a participant, you are not at the review meeting as advocates or representatives of interest groups. You are expected to participate fully in the review and the decision-making of the science meeting. As such, participation at this meeting is by invitation and approval of the meeting chair.

I have included in Annex B some details regarding meeting logistics at the Gulf Fisheries Centre.

I look forward to seeing you on March 17. Please feel free to call me if you have any questions about the upcoming review.

documents. Je vous demande de respecter ce principe de confidentialité pour éviter la diffusion de potentiellement fausses informations sur l'état de la ressource.

Le débat approprié durant cette revue sera d'aspect scientifique relié à l'évaluation du stock. Ce n'est pas un forum pour débattre des problèmes de gestion et des conflits d'allocation de la ressource.

Le processus de revue scientifique du MPO fait une distinction entre un participant et un représentant. Les participants à la revue scientifique n'agissent pas en temps que défenseurs des droits ou des représentants d'un groupe d'intérêt. Les participants doivent s'attendre à participer pleinement au processus de prise de décisions pendant la réunion. Ainsi, la participation aux réunions de revue scientifique est à l'invitation et l'approbation du président de la réunion.

Je vous envoie en Annexe B quelques clarifications au sujet du lieu de rencontre au Centre des Pêches du Golfe.

J'aurai le plaisir de vous accueillir le 17 mars prochain. N'hésitez pas à m'appeler si vous avez des questions au sujet de cette réunion.

Original signed and on file

Gérald Chaput

Chair, Science Review for the herring stock of NAFO Division 4VWX
Coordinator
Scientific Advisory Process
Oceans and Science Branch
Gulf Region
P.O. Box 5030

Président, Revue Scientifique des stocks de hareng de la division 4VWX de l'OPANO
Coordonnateur
Processus de revue scientifique
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Appendix A / Annexe A.		
Title / Titre	**Authors / auteurs**	**Format**
Herring Ageing: Bomb Radiocarbon and Dominant Year-class Tracking Studies in 4WX.	G.D. Melvin, S. Campana and M.J. Power	Attachment to email in PDF format
Review of herring annual growth increment in size	G.D. Melvin and M.J. Power	Attachment to email in PDF format
4VWX herring assessment	Power et al.	Available for distribution March 14
Proceedings of the Maritime Provinces Regional Advisory Process on the Assessment Framework for 4VWX Herring Stocks	Canadian Science Advisory Secretariat Proceedings Series 2007/002	Attachment to email in PDF format
2007 ASSESSMENT OF 4VWX HERRING	Canadian Science Advisory Secretariat Science Advisory Report 2007/023	Attachment to email in PDF format
Proceedings of the Maritime Provinces Regional Advisory Process on Assessment of 4VWX Herring	Canadian Science Advisory Secretariat Proceedings Series 2007/021	Attachment to email in PDF format

Appendix B. Logistics for the meeting at the Gulf Fisheries Centre

The meeting is scheduled from 8:30 AM to 5:00 PM. The meeting room will be open at 8:15 AM so that the meeting can commence promptly at 8:30 AM.

You must access the DFO Gulf Fisheries Centre (GFC) from the main door on Université Avenue.

There are very limited (less than 5) parking space for visitor vehicles at the GFC. Frist priority for those spaces is for individuals with special needs. For all others, if you are travelling with your own vehicle, you can find parking spaces for the public (for fee) at a number of locations within easy walking distance from the GFC. The map at the end of this note identifies those locations for you.

For security reasons, you will have to sign in at the commissionnaire's desk and you will be issued a visitor's identification card which must be displayed at all times. The commissionnaires will have a list of the meeting participant names. Your visitor's pass must be returned at the end of the day

Annexe B. Organisations du lieu de rencontre au Centre des Pêches du Golfe

Nous serons en session de 8h30 à 17h00. La salle de réunion sera ouverte à 8h15 chaque matin pour permettre le début des rencontres à 8h30.

Vous aurez accès au Centre des Pêches du Golfe (CPG) par la porte principale sur la rue Université.

Le stationnement pour les visiteurs est très limité (moins de 5 espaces) au CPG. La priorité est pour les gens qui ont des besoins spéciaux. Pour tous les autres, si vous venez en voiture, vous pouvez trouver des terrains de stationnement payant public à différents endroits dans la ville, dans un rayon d'une courte march du CPG. Une carte de la ville avec les sites de stationnements publics indiqués est inclue.

Pour des raisons de sécurité, vous devez vous présenter au bureau des commissionnaires à l'entrée. Vous serez enregistrés et on vous donnera une carte d'identification de visiteur qui doit être portée en tout temps. Les commissionnaires auront la liste de noms des participants à la réunion. Vous devez retourner votre carte d'identification de

visiteur à la fin de chaque journée.

We have scheduled 15 minute health breaks in the morning and afternoon and refreshments will be provided.

Nous avons prévu des pauses-santé de 15 minutes le matin et en après-midi et les rafraîchissements seront fournis.

We have scheduled a one hour break for lunch. Lunch is at the participant's own cost. There is a cafeteria at the Gulf Fisheries Centre (GFC) where a simple lunch including a warm lunch special can be purchased. There are limited options for lunch near the GFC. As we have scheduled only a one hour break, you are encouraged to consider using the in-house cafeteria or bring a lunch with you.

Une pause d'une heure est prévue pour le déjeuner, à vos frais. Les options pour le déjeuner dans les alentours du CPG sont limités. Vous pouvez vous procurer une sélection de plats simples ainsi qu'un plat chaud à la cafétéria dans le CPG. Puisque nous n'avons prévu qu'une heure pour le déjeuner, je vous conseille de choisir le menu de la cafétéria ou d'apporter avec vous votre déjeuner.

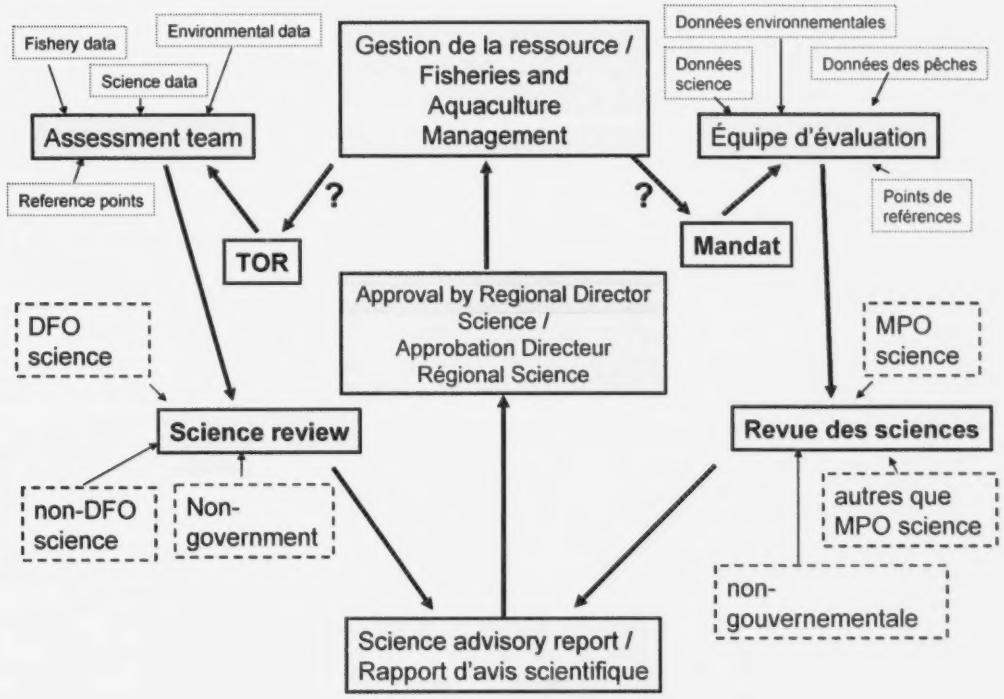
There are power outlets for computers but no internet access in the room. There will be microphones at the tables for clarity and the presentations and discussions will be recorded.

Il y aura des prises de courant disponibles dans la salle pour les ordinateurs mais il n'y aura pas d'accès à l'internet. Des microphones seront installés autour des tables pour aider à la compréhension des présentations et des discussions. En outre, le tout sera enregistré.

The meeting will be conducted in english.

La réunion sera présidée en anglais.

Appendix 5. *Summary of science advisory process describing the steps from a request for advice from DFO Fisheries and Aquaculture Management, development of terms of reference, preparation of assessment documents, science review, development of science advice and return of advice to the requesting DFO sector.*



Appendix 6. *Participants at the science review of 4VWX herring, March 17, 2008.*

Name / nom	Affiliation	Telephone / téléphone	FAX / télécopieur	Email / Courriel
Barrow, Julia	Department of Fisheries & Oceans / Resource Management Operations Ottawa	(613) 990 0091	(613) 990 7051	BarrowJ@dfo-mpo.gc.ca
Biron, Michel	Ministère des Pêches et des Océans Région du Golfe Océans et Sciences	(506) 851-6046	(506) 851-3062	Bironm@dfo-mpo.gc.ca
Brown, Reid	Fundy Weir Fishermen Assn (FWFA)	(506) 755-6644	(506) 755-6646	fndyweir@nbnet.nb.ca
Burgess, Gordon	Little Hope Herring Mgmt. Comm	(902) 683 2620	(902) 947 2702	knotpaidiv@msn.com
Chandler, Alan	Province of Nova Scotia Fisheries & Aquaculture	(902) 424 3665	(902) 424 1766	chandlea@gov.ns.ca
Chaput, Gérald	Ministère des Pêches et des Océans Région du Golfe Océans et Sciences	(506) 851-2022	(506) 851-2147	ChaputG@dfo-mpo.gc.ca
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Clay, Allen	Femto Electronics Limited	(902) 865-8565	(902) 865-8558	allenclay@femto-electronics.com
Cline, Gerald (Jeff)	Fisheries and Oceans Canada Maritimes Region Fisheries and Aquaculture Management	(506) 755 5033	(506) 755 5061	ClineG@dfo-mpo.gc.ca
Cronk, Ron	Province of New Brunswick Dept of Fisheries & Aquaculture	(506) 662 7026	(506) 662 7030	Ronald.Cronk@gnb.ca
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Grégoire, François	Ministère des Pêches et des Océans Région Québec Direction des Sciences	(418) 775-0589	(418) 775 0740	GregoireF@dfo-mpo.gc.ca
Knox, Derek	Fisheries and Oceans Canada Maritimes Region Science Branch	(506) 529-5959	(506) 529-5862	KnoxD@dfo-mpo.gc.ca
Hooper, Tony	Connors Bros. Ltd.	(506) 456-1520	(506) 456-1568	tony.hooper@connors.ca

Appendix 6 (continued). *Participants at the science review of 4VWX herring, March 17, 2008.*

LeBlanc, Claude	Ministère des Pêches et des Océans Région du Golfe Océans et Sciences	(506) 851-3870		LeBlancCH@dfo-mpo.gc.ca
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Tarzalt, Malika	Ministère des Pêches et des Océans Région du Golfe Economy and Policy Research	(506) 851 4961		TarzaltM@dfo-mpo.gc.ca
Wheeler, John	Fisheries and Oceans Canada Newfoundland and Labrador Region Science Branch	(709) 772 2005	(709) 772 4188	WheelerJ@dfo-mpo.gc.ca

Appendix 7. *Draft agenda for the 4VWX herring science review.*

MONDAY, MARCH 17, 2008	Time / Heure	***Le lundi 17 mars 2008***
Meeting room open, participants arrive and set-up for meeting	08:15 – 08:30 am 08h15 – 08h30	Ouverture de la salle de rencontre, arrivé des participants, préparations pour la réunion
Opening remarks and review of agenda	08:30 – 08:45 am 08h30 – 08h45	Mot de bienvenue et revue de l'ordre du jour
Nova Scotia / Bay of Fundy spawning component	08:45 – 10:00 am 08h45 – 10h00	Composante géniteurs de la Nouvelle-Écosse et la Baie de Fundy
Health Break	10:00 – 10:15 am 10h00 – 10h15	Pause santé
Nova Scotia / Bay of Fundy spawning component (cont'd)	10:30 – 12:00 pm 10h30 – 12h00	Composante géniteurs de la Nouvelle-Écosse et la Baie de Fundy (suite)
Lunch	12:00 – 1:00 pm 12h00 – 13h00	Déjeuner
Offshore Scotian Shelf spawning component, coastal Nova Scotia spawning component and update on southwest New Brunswick migrant juvenile fishery component	01:00 – 02:45 pm 13h00 – 14h45	Composantes géniteurs de plateau Néo-écossais, côte de la Nouvelle-Écosse, et mis à jour de la pécherie sur les juvéniles migrateurs du sud-ouest Nouveau-Brunswick
Health Break	02:45 – 03:00 pm 14h45 – 15h00	Pause santé
Review of 4VWX Science Advisory Report	03:00 – 05:15 pm 15h00 – 17h15	Revue de l'ébauche du rapport d'avis des sciences pour le hareng 4VWX
Evaluation of science review process	05:15 – 05 :30 pm 17h15 – 17h30	Évaluation de la réunion de la revue scientifique

Appendix 8. *Summary of evaluation form scoring for the science review of Atlantic herring from 4VWX, March 17, 2008. Responses were received from one of the DFO science assessment team, one from DFO Fisheries and Aquaculture Management and six industry participants.*

Objectives of the meeting and participation	DISAGREE strongly en Fortement DÉSACCORD	DISAGREE DÉSACCORD	Neutral - Neutre	AGREE ACCORD	AGREE strongly en Fortement ACCORD
Terms of reference (mandate) were clear.				6	2
My role as a participant was clearly explained.			1	5	2
I understood and agreed with my tasks as a participant.	1		2	3	2
Information reviewed at the meeting					
Assessment considered user/local knowledge		1		6	
Technical details in documents were complete	1		1	5	
Documents received in sufficient time to prepare for the review	1	3	3		
Presentations were clear and easy to follow		1		5	1
Review and editing of science advisory report was complete		1	1	5	
Science advisory report is easy to understand		1	2	4	
My contribution at the science review					
I was able to understand the technical details			1	4	2
I was able to contribute to the review of the assessment			2	5	
I was at ease as a participant			2	5	
Inclusiveness					
Assessment team was knowledgeable and objective			2	3	2
Science reviewers were knowledgeable and objective			3	3	1
Non-government participants were knowledgeable and objective			2	5	
Chair ensured all participants were treated equally				4	3
Meeting arrangements					
Sufficient notification time was given for the meeting			2	5	1

Sufficient time to nominate participants			3	4	1
Meeting room was large enough and comfortable			1	5	2
I was able to express myself in the official language of my choice			2	4	2
Translation service was good					
Science advisory process					
Sufficient time allocated in the agenda to address the terms of reference		2	3	3	
Good choice of science participants		1	1	6	
The debates were interesting and useful to achieve the objectives			3	4	1
The answers to questions were satisfactory		2		4	1
Mix of science and non-science was appropriate				7	1
Good choice of non-science participants			2	4	2
Science did not intrude on the responsibilities of management	1	1	2	4	
Skilled and effective chairperson			1	3	4
Possible ways to improve the science advisory process					
Assessment team should meet with industry to obtain and incorporate user knowledge before the meeting			1	4	2
Technical discussions should be done in a science meeting only, with scientific participants only	3	3	1		
Meeting size should be limited by restricting participation	2	3	2		
Meetings should be open to observers		1	1	3	2
Have science information session for general public following the science review	1	2	4		
Develop a training program for non-science people to facilitate their participation	2	1	4		